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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,541	12/12/2003	Kenji Shiraishi	1536	9699

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EXAMINER
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PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/734,541

Applicant(s)

SHIRAISHI ET AL.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/18/04</u> . | 6) <input type="checkbox"/> Other: ____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdmannsdoerfer (6,235,089 B1), in view of any one of Head et al (4,102,785), Brownell (4,877,527) and Kennedy et al (5,605,748).

Erdmannsdoerfer discloses a gas filter comprising a case (7) with a filter element (1) provided inside the case, an inlet hole (8), an outlet hole (9), a filtration portion (5, 6) composed of a first filtration material (5) made of glass fiber thread wound around a perforated plate support and a second filtration material (6) composed of nonwoven fabric tightly wound around the first filtration material, a draining hole (10) for draining oil accumulated inside provided in the bottom portion of the case (see col. 2,

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line 53 through col. 3, line 43). Head et al disclose a filter tube (10) having glass fibers woven sheet material (14) wrapped about 3 revolutions and positioned within the fiber wall (12) of the tube, and a wrapping of about 3 to 6 times of a coarser glass fiber prefilter mat (16) about the metal tube (18), and an end cap (22) (see col. 6, line 53 through col. 7, line 15). Brownell discloses a filter cartridge (10) including a filtering media (16) with paper filtering medium wound circumferentially around the center tube (12), a paper medium (18) including fine diameter fiberglass fibers wound around the centertube (12) approximately 1 ½ times, a batt-like filtering medium (20) made of natural fibers such as wood pulp fibers or artificial fibers such as polyester, polyamide or glass fibers. (see col. 2, line 24 through col. 3, line 2). Kennedy et al (5,605,748) disclose a fiber bed for use in mist eliminator comprising a collecting fiber layer (20) of glass fibers, a stabilizing fibers (30) of polymeric materials such as polyesters, nylons, polyethylene, polypropylene or polyethylene terphthalate, etc. (see col. 6, line 32 through col. 8, line 9). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide layers of different filtering materials wound around the filter support as taught by any one of Head et al (4,102,785), Brownell (4,877,527) and Kennedy et al (5,605,748) in the gas filtering device of Erdmannsdoerfer to provide an improved process for removing liquid aerosols and soluble solids from a moving stream of gas through the mist eliminator.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Teague et al (4,915,714) disclose a fiber bed element.
- Miller et al (5,252,207) disclose a wrap member.
- Snyder, Sr. (5,713,972) discloses a particulate matter filtration system.
- Perrotta et al (5,800,597) disclose a coalescer filter membrane device.
- Shirk et al (5,830,250) disclose a stepped hot gas filter cartridge.
- Bayerlein et al (6,153,098) disclose spiral wound filter.
- Kahlbaugh et al (6,521,321 B2) disclose a filter material construction.
- Miller et al (4,759,782) disclose a coalescing filter for removing of liquid aerosols from gaseous streams.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit: 1724**  
**January 17, 2005**